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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/693,603      | 10/27/2003  | Jan Evert Van Der Werf | 081468-0306523      | 6464             |

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| EXAMINER |
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STAFIRA, MICHAEL PATRICK

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2877

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 12/22/2006 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/693,603

Applicant(s)

WERF ET AL.

Examiner

Michael P. Stafira

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/27/2003; 07/05/2006.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 13-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Groups II, III, IV, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 10, 2006.

### *Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12, 21-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106)), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely comparing the printed test pattern to the printed reference pattern etc.. would not appear to be sufficient to constitute a tangible result, since the outcome of the comparing step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-8, 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Omae et al. ('793).

**Claim 1**

Omae et al. ('793) discloses printing a reference pattern (Fig. 1, Ref. MA) on a reference substrate (Fig. 1, Ref. PB) using the patterning device (Col. 3, lines 36-43); printing a pattern for manufacture of a device on a production substrate different from said reference substrate using the patterning device (Col. 8, lines 44-55); printing a test pattern on a test substrate using the patterning device; and comparing the printed test pattern to the printed reference pattern to detect a defect in the patterning device (Col. 3, lines 45-65).

**Claim 4**

Omae et al. ('793) discloses the test substrate is the reference substrate (See Fig. 1, Ref. PB).

**Claim 5**

Omae et al. ('793) the printed test pattern is a pattern in developed resist (Col. 3, lines 53-55).

**Claim 6**

Omae et al. ('793) further discloses the reference pattern is printed at a plurality of different locations on the reference substrate (Fig. 1, Ref. MA, P11-P13).

**Claim 7**

Omae et al. ('793) further discloses individual printed reference patterns are spaced such that an individual test pattern can be printed beside each individual printed reference pattern (See Fig. 1).

**Claim 8**

Omae et al. ('793) further discloses the printed test pattern to the printed reference pattern the patterned test substrate and reference substrate are scanned by at least one optical defect inspection tool (Fig. 2, Ref. 11).

**Claim 10**

Omae et al. ('793) discloses wherein multiple comparisons take place between multiple printed reference patterns and multiple printed test patterns (Col. 8, lines 44-55).

**Claim 11**

Omae et al. ('793) further discloses wherein majority voting determines location of the defect in the patterning device (Col. 8, lines 56-67).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3, 9, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omae et al. ('793).

**Claim 2**

Omae et al. ('793) discloses the claimed invention except for the substrate is a silicon wafer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Omae et al. ('793) with the silicon wafer since it was well known in the art that using silicon wafers is the most economical material for mass production, therefore lowering manufacturing costs.

**Claim 3**

Omae et al. ('793) discloses the claimed invention except for the silicon wafer having a SiO<sub>2</sub> layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Omae et al. ('793) with the SiO<sub>2</sub> layer since it was well known in the art that using such a layer improves image pattern repeatability, therefore decreasing the amount of waste.

**Claim 9**

Omae et al. ('793) discloses the claimed invention except for the reference pattern substrate and test pattern substrate are scanned simultaneously. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Omae et al. ('793) with simultaneously scanning since it was well known in the art that scanning the substrates simultaneously increases the speed of the inspection, therefore decreasing the manufacturing time of the substrates.

**Claim 12**

Omae et al. ('793) discloses the claimed invention except for the patterning device is a photolithography mask. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Omae et al. ('793) with the photolithography mask since it was well known in the art that using a photolithographic mask produces reliable pattern information, therefore decreasing the amount of defect transferred a substrate.

6. Claims 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Omae et al. ('793).

**Claim 21**

Omae et al. ('793) discloses generating a reference pattern (Fig. 1, Ref. Ma) on a first substrate (Fig. 1, Ref. PB) using a projection beam of radiation and the patterning device; generating a pattern on a second substrate using the projection beam of radiation and the patterning device; and comparing the reference pattern on the first substrate to the pattern on the second substrate to detect a defect in the patterning device (Col. 3, lines 45-65).

**Claim 22**

Omae et al. ('793) discloses the pattern is a test pattern and the second substrate is a test substrate (See Fig. 1).

**Claim 23**

Omae et al. ('793) discloses the pattern is a test pattern and the second substrate is the first substrate (See Fig. 1).

**Claim 24**

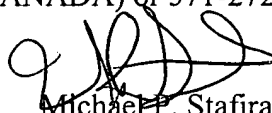
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Omae et al. ('793) discloses the pattern comprises features of a manufactured device and the second substrate comprises the manufactured device (Col. 8, lines 44-55).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Michael P. Stafira  
Primary Examiner  
Art Unit 2877

December 11, 2006